What is claimed is:

1. A probe deflection device comprising:

an outer tube having a distal end; and

an inner tube capable of sliding within the outer tube, the inner tube having an inner tube distal end and material properties such that as the inner tube slides beyond the distal end of the outer tube, the inner tube follows a desired travel path.

2. The probe deflection device of claim 1, wherein the outer tube is fabricated from a magnetic resonance (MR) compatible material.

3. The probe deflection device of claim 2, wherein the MR compatible material is titanium.

4. The probe deflection device of claim 1, wherein the outer tube has an inside diameter and the inner tube has an outside diameter and the inside diameter is between about .186 and about .190 centimeters and the outside diameter is between about .171 and about .174 centimeters.

5. The deflection device of claim 1, wherein the inner tube is fabricated from a flexible material.

6. The probe deflection device of claim 1, wherein the inner tube is fabricated from a resilient material having a memory.

7. The probe deflection device of claim 6, wherein the resilient material having a memory is nitinol.

8. The probe deflection device of claim 7, wherein the inner tube is capable of being rotated within the outer tube.

9. The probe deflection device of claim 1, wherein the outer tube has a length and a longitudinal axis and the desired travel path includes a segment which creates an angle of about thirty degrees with the longitudinal axis.

10. The probe deflection device of claim 1, further comprising:

a probe inserted in the inner tube.

11. The probe deflection device of claim 10, wherein the probe is an electrode.

12. The probe deflection device of claim 10, wherein the probe is a fiber optic strand.

13. The probe deflection device of claim 1, further comprising:

a stylet having a blunt tip such that when the stylet is fully inserted into the inner tube, the blunt tip and the inner tube distal end form a smooth blunt tip suitable for tunneling through tissue of a biological subject.

14. A probe deflection device comprising:

an outer tube having a proximal end and a distal end, the outer tube including a closure having an exit hole defining a travel path; and

an inner tube fitted to slide within the outer tube such that as the inner tube slides through the exit hole, the inner tube follows the travel path.

15. The probe deflection device of claim 14, wherein the exit hole includes a center line that creates an oblique angle with the longitudinal axis.

16. The probe deflection device of claim 14, wherein the closure has an actuator arm accessible at the proximal end of the outer tube.

17. The probe deflection device of claim 14, wherein the closure is capable of being closed as the inner tube is inserted into the outer tube.

18. The probe deflection device of claim 14, wherein the closure is capable of being open as the inner tube is withdrawn into the outer tube.

19. The probe deflection device of claim 14, wherein the inner tube is flexible.

20. The probe deflection device of claim 14, wherein the inner tube is fabricated from a material having memory.

21. The probe deflection device of claim 14, further comprising:
a flexible stylet capable of being inserted into the inner tube, the flexible stylet having a blunt polished tip.

22. The probe deflection device of claim 21, wherein the flexible stylet includes an imaging contrast media.

23. The probe deflection device of claim 22, wherein the stylet has a cavity holding the imaging contrast media.

24. The probe deflection device of claim 23, wherein the imaging contrast media is a saline solution.

25. The probe deflection device of claim 14, wherein the outer tube is rotatable about the inner tube.

26. The probe deflection device of claim 14, further comprising:
a probe inserted in the inner tube.

27. The probe deflection device of claim 14, further comprising:
a thin retractable sheath covering the exit hole.

28. A probe deflection device comprising:

an outer tube having an axis and a shaped distal end having an inner surface for defining an off-axis travel path;

an inner tube capable of sliding in the outer tube and following the off-axis travel path; and

a biasing element located between the inner tube and the outer tube, the biasing element for altering the position the inner tube within the outer tube during insertion and extraction of the inner tube.

29. The probe deflection device of claim 28, wherein the inner surface defines an off-axis travel path about thirty degrees off-axis.

30. The probe deflection device of claim 28, wherein the inner tube is fabricated from a resilient material having a memory.

31. The probe deflection device of claim 28, wherein the biasing element has a cross-sectional shape defined by two intersecting arcs.

32. The probe deflection device of claim 28, wherein the inner tube has a rotational position within the outer tube and the rotational position is capable of being fixed.

33. A method of inserting a probe into a subthalamic nucleus of a biological subject, the subthalamic nucleus having a longitudinal axis, the method comprising:

inserting a probe into the biological subject along a path oblique to the longitudinal axis; and

deflecting the probe from the path onto a second path oriented along the longitudinal axis of the subthalamic nucleus.

34. The method of claim 33, wherein inserting a probe into the biological subject along a path oblique to the longitudinal axis comprises:

inserting a probe deflection device into the biological subject along the path oblique to the longitudinal axis;

extending the probe deflection device along the longitudinal axis of the subthalamic nucleus; and

inserting the probe into the probe deflection device to a location near the longitudinal axis.

35. The method of claim 34, wherein deflecting the probe from the path onto a second path oriented along the longitudinal axis of the subthalamic nucleus comprises:

inserting the probe into the probe deflection device such that the probe extends into the subthalamic nucleus.

36. A method of positioning a probe in a target area that is off axis from an outer tube inserted in a biological subject, the method comprising:

forming an inner tube having a bend;

inserting the inner tube into the outer tube having a distal end such that the bend extends beyond the distal end of the outer tube;

inserting a probe into the inner tube such that the probe extends beyond the end of the outer tube; and

removing the inner tube without deflecting of the probe.

37. The method of claim 36, wherein forming an inner tube having a bend further comprises:

forming the inner tube from a resilient material having a memory; and

forming the bend in the inner tube.

38. The method of claim 37, wherein forming the bend in the inner tube comprises:

forming the bend having an angle of about thirty degrees in the inner tube at a point about 1.3 centimeters from the end of the inner tube.

39. A method of positioning a probe in a target area that is off axis from an outer tube inserted in a biological subject, the method comprising:

inserting an inner tube having a tip into the outer tube having an outer surface and a closure having an exit hole such that the tip extends through the exit hole and beyond the outer surface of the outer tube;

inserting a probe into the inner tube such that the probe extends beyond the surface of the outer tube;

opening the closure; and

removing the inner tube without deflecting of the probe.

40. A method of inserting a probe along a longitudinal axis of a subthalamic nucleus, the method comprising:

locating an end of an outer tube near a longitudinal axial end of the subthalamic nucleus;

forming a bend of about thirty degrees in the inner tube at a point about 1.3 centimeters from the first end of the inner tube;

inserting the inner tube into the outer tube such that the inner tube extends along the longitudinal axis of the subthalamic nucleus;

inserting a probe into the inner tube such that the probe extends beyond the end of the outer tube; and

removing the inner tube without deflecting the probe.

41. The method of claim 40, wherein locating an end of an outer tube near a longitudinal axial end of the subthalamic nucleus comprises:

locating the end of the outer tube within about one-tenth of a centimeter of the longitudinal axial end of the subthalamic nucleus.

42. The method of claim 40, wherein inserting the inner tube into the outer tube such that the inner tube extends along the longitudinal axis of the subthalamic nucleus comprises:

inserting a stylet into the inner tube; and

pushing the stylet through the outer tube and into the subthalamic nucleus.

43. A method of orienting a first end of an inner tube of a probe deflection device in a biological subject, the method comprising:

inserting an outer tube into the biological subject;

inserting an inner tube into the outer tube such that a bend in the inner tube extends beyond an end of the outer tube;

identifying an error in orientation of the inner tube;

if the error exceeds a predetermined value, partially retracting the inner tube into the outer tube and rotating the inner tube to correct the error; and

extending the first end of the inner tube beyond the end of the outer tube such that the bend extends beyond the end of the outer tube.

44. The method of claim 43, wherein identifying an error in orientation of the inner tube comprises:

using imaging to identify the orientation of the inner tube.

45. A method of orienting an outer tube of a probe deflection device in a biological subject, the method comprising:

inserting an outer tube having a surface and an off axis exit hole into the biological subject;

inserting a stylet having an imaging marker and a blunt tip into an inner tube to obturate the off axis exit hole;

inserting the inner tube having a distal end into the outer tube such the distal end does not extend beyond the surface of the outer tube;

identifying an error in orientation of the outer tube using the imaging marker; and

if the error exceeds a predetermined value, rotating the outer tube to correct the error.

46. The method of claim 45, wherein identifying an error in orientation of the outer tube comprises:

using imaging to identify the orientation of the outer tube.

47. The method of claim 46, wherein using imaging to identify the orientation of the outer tube comprises:

imaging the imaging marker.